Jan. 8, 1924. 1,480,501

S. O. BRYANT

GATE

Filed Aug. 18, 1921

Fig. 1.

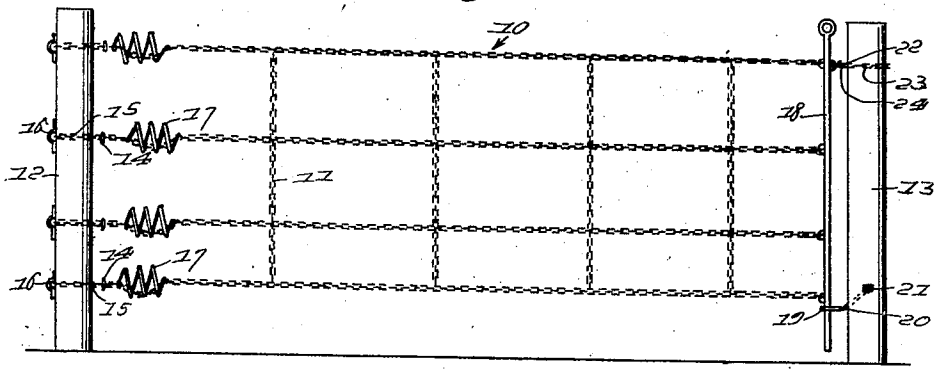


Fig. 2.

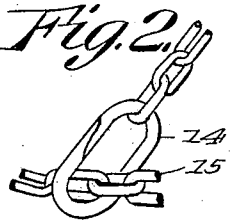


Fig. 3.

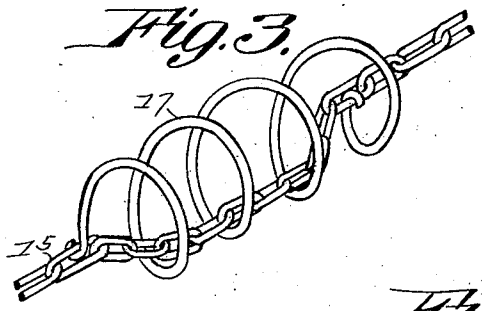


Fig. 4.

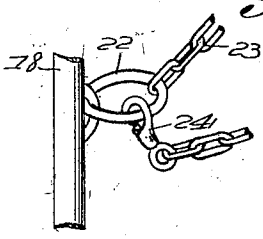
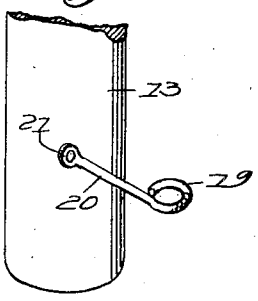


Fig. 5.



Inventor

Stephen O. Bryant,

By Attorney

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UNITED STATES PATENT OFFICE.

STEPHEN O. BRYANT, OF BETHANY, MISSOURI.

GATE.

Application filed August 18, 1921. Serial No. 493,284.

To all whom it may concern:

Be it known that STEPHEN O. BRYANT, a citizen of the United States of America, residing at Bethany, in the county of Harrison and State of Missouri, has invented new and useful Improvements in Gates, of which the following is a specification.

The object of the invention is to provide a simple, inexpensive and efficient gate suitable for farm use particularly in connection with wire fences and the like employed in the enclosure of pasturages and the like and designed to effectively resist the efforts of stock to leave the enclosure; and with these objects in view the invention consists in a construction and combination of parts of which a preferred embodiment is shown in the accompanying drawings, wherein:

Figure 1 is an elevation of a gate embodying the invention.

Figure 2 is a detail view of the means whereby the runner elements of the gate are connected with the hinge post.

Figure 3 is a similar view of the compensating means interposed in the gate runners to cushion strains applied thereto and retain the required tautness of the runners.

Figure 4 is a similar view of the latch device whereby the upper end of the stretcher at the free end of the gate is secured to the latch post.

Figure 5 is a similar view of the step device for the lower end of the stretcher rod.

The gate consists of a plurality of flexible runners 10, consisting for example and as preferred of chains, transversely connected at intervals by bracing elements 11 also consisting of chains and arranged between uprights or posts which for convenience of designation may be referred to as the hinge post 12 and the latch post 13. At the hinge end of the gate adjacent to the hinge post 12 each of the runners is provided with a terminal split ring 14 through which the body portion of the runner extends after having been looped as at 15 around the hinge post, a suitable keeper 16 being attached to the post in spanning relation with each looped portion of the runner to prevent the vertical displacement of the runners relative to the post and which may be of any preferred construction.

Also interposed in the length of each runner, preferably near the hinge end thereof is a compensating device consisting of a volute spring 17 terminally attached to links of the chain with the intermediate portion of the chain in a slack or loose condition as indicated in detail in Figure 3 so as to permit of a longitudinal extension of the spring under tensile strain applied to the runner to cushion such strains while limiting the same within the range of elasticity of the springs should the strain be excessive or severe.

The free ends of the runners are connected by a stretcher rod 18 and carried by the latch post near its lower end or near the surface of the ground is a step socket 19 consisting of a ring adapted to receive the lower end of the stretcher rod and preferably carried by an arm 20 which is pivotally mounted as at 21 upon the post to permit of the swinging of the socket to an unobstructive position with relation to the post when the stretcher rod is disengaged therefrom. This folding movement of the step socket serves to remove the same from the path of cattle or other object passing through the gateway or opening and thus guard against the displacement or dismounting of this element of the means for securing the gate in its closed position. In addition to the step socket for the lower end of the stretcher rod the latter carries a ring 22, located near the upper end thereof and preferably in alignment with the uppermost runner, and having connected therewith a latch chain 23 adapted to pass around the latch post in a looped form, the extremity of said latch chain being provided with a snap hook 24 for engagement with the ring 22 so as to cooperate with the step socket in holding the stretcher rod close to and in parallelism with the latch post and with the runners of the gate under tension. Preferably the runners supplemented by the contractive effect of the compensating device 17 are of such length as to require the application of considerable strain thereto in bringing the stretcher rod into such relation with the post as to effect an engagement with the holding means, but the inconvenience or strain incident to such operation is materially simplified by first inserting the lower extremity of the stretcher rod in the eye 19 forming the step socket and then using the stretcher rod as a lever by applying pressure to the upper end thereof to stretch the runners and bring the rod close enough to the latch post to permit of the engagement of the latch chain as above described.

Having described the invention, what is claimed as new and useful is:—

1. A gate having in connection with the hinge post and latch post a plurality of longitudinal flexible runners provided at one end with means for engaging the hinge post and at the other end with means for engaging the latch post and provided at intermediate points with yielding tensile cushioning means consisting of volute springs, terminally engaged with said runners with intermediate normally slack or loose portions of the runners constituting means for limiting the extension of the springs.

2. A gate comprising, in conjunction with a hinge post and a latch post, of a plurality of longitudinal flexible chains provided at one end with means for engaging the hinge post and at the other end with means for engaging the latch post, a yielding tensile cushioning means consisting of loop springs carried by the chains at points intermediate their connections with the hinge and latch posts, said springs terminally disengageably connected with said chains and being adjustable to increase and decrease their tension as well as the tension of the chains which have intermediate normally slack or loose portions supported by the convolutions of the springs and constituting means for limiting the extension of the springs.

In testimony whereof he affixes his signature.

STEPHEN O. BRYANT.